



# Annual Report 2005

Household Hazardous Waste,  
Pollution Prevention, Processing  
Facilities and Landfill Monitoring  
Programs

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This report is designed to give information about the programs that are funded by tonnage and permit fees. The Health Department assesses these fees on all private and public landfills, construction & demolition landfills, monofills, processing facilities which includes recycling facilities and transfer stations located in the Salt Lake Valley. These fees fund the household hazardous waste, pollution prevention, landfill monitoring and processing facilities programs. These fees also help support the emergency response program, primarily the aspect of this program that investigates rejected loads from the permanent household hazardous waste facilities.

The **Household Hazardous Waste Program** runs two permanent facilities that accept household hazardous waste from Salt Lake Valley residents. The facilities are located at the TransJordan Landfill, 10873 South 7200 West, and the Salt Lake Valley Solid Waste Facility, 6030 West California Ave. The program also operates an ABOP center at the Murray Public Works Department which accepts antifreeze, batteries, oil, and paint. The program works to address the improper disposal of household hazardous waste by educating the public to the hazards associated with improper disposal and storage. The program also works to remain current on issues that are being addressed on a National level such as electronic and pharmaceutical waste.

The **Pollution Prevention Program(P2)** serves several functions. Staff in this program review new business license applications and inspect those who fall under SLVHD regulations. This allows P2 staff to work with businesses early on as they are identifying their waste streams and disposal options. P2 staff are always available to review P2 plans and conduct facility audits that are often required as part of settlement agreements reached after a business has been found in violation of SLVHD regulations. P2 staff are also involved in various educational activities such as answering questions at the Household Hazardous Waste booth at the Farmer's Market, giving presentations to various groups on non-toxic alternatives to cleaning and garden products, and developing educational brochures.

The **Landfill Monitoring and Processing Facility** Health Regulation#1 requires all landfills, monofills, transfer stations, recyclers, and waste treatment facilities to obtain a permit from the Health Department.

Many of these facilities have groundwater monitoring that is overseen by Health Department personnel. New construction and engineering evaluation is reviewed by the Department. Closure and Post closure is reviewed approved and inspected by Health Department personnel.

We are required to monitor facilities for 30 years after closure to determine adequate environmental protection and controls are in place.

Currently we have five closed landfills: North Temple, UDOT, Murray, Sandy and Hugo Neu autofluff monofill that fall into the category where we are actively looking at settlement, methane monitoring, and groundwater monitoring.

We are currently permitting two municipal landfills, three municipal transfer stations, one construction/demolition transfer station, one infectious waste transfer station, three monofills, two construction/demolition landfills, five private noncommercial landfills and numerous recyclers and waste processing facilities.

We inspect these facilities at least annually and when requested by the facility or in response to a complaint.



Our processing facility program has steadily grown over time to include short term remediation of petroleum impacted soils, concrete recyclers, biodiesel manufacturers, grease processors and sump waste processors.

The Department also investigates and pursues illegal dumping and disposal. We work with property owners who have discovered past landfills when developing their property. This is quite common in the valley. We will address safety and long term environmental concerns both during and after development.

## Household Hazardous Waste Program

This year the household hazardous waste (HHW) program saw a decrease in participation and amount of waste collected. The decrease was substantial and was probably due in part to the cancellation of the one-day collection events and the publicity that surrounds these events. Highlights of 2005 are as follows:

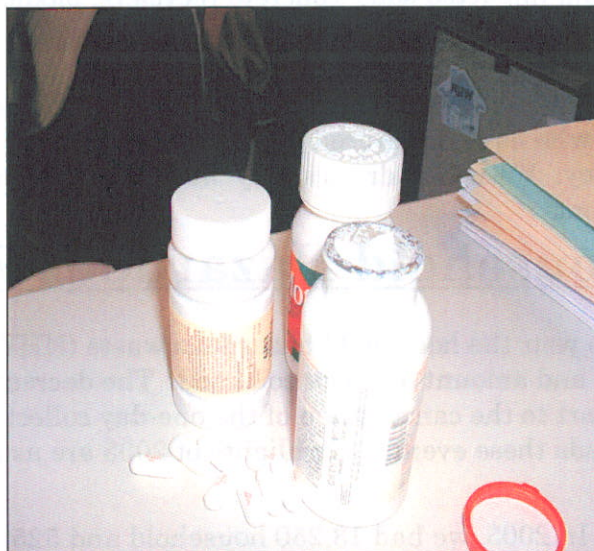
- In 2005, we had 13,250 household and 525 businesses participate in the HHW program. The household participation decreased by 9,124 or 41%. Businesses participation increased by 10 businesses.
- In 2005 we collected 646,704 pounds of hazardous waste. Of this amount we diverted 222,943 pounds of waste through the reuse program, which saved approximately \$100,324 in disposal costs. We diverted a higher proportion of our waste through the reuse program, 35% in 2005 as opposed to 25% in 2004.
- Due to budget constraints the one-day collection events were not held in 2005. Many people called wanting to know how they could conveniently dispose of their HHW, we unfortunately did not have any local options. Also, for budget reasons we did not pay for any advertisements in 2005.
- Our Department in conjunction with the Tran-Jordan Landfill and Salt Lake Valley Solid Waste Facility's Recycling Office sponsored three electronic collection days. The first event was held in January in Salt Lake City in order to offer people a convenient way to get rid of the old electronic equipment that was replaced by Christmas gifts. More electronic equipment is purchased in December, than at any other time in the year. We collected 167 units from 47 people. The second and third events were held in Sandy where we collected a total of 1,397 units from 247 people.



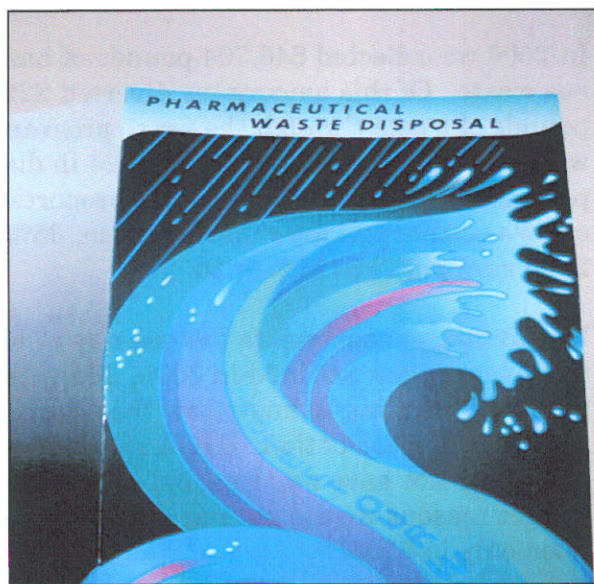


- In 2005, the Department began work in developing a program to address pharmaceutical waste. Federal law prohibits the HHW program from receiving controlled medications. As a result, many people flush unwanted medications down their toilets. Sanitary water districts do not treat or test for the levels of pharmaceuticals in our waste water. Unfortunately, waterways across the nation are beginning to show evidence of medication levels. Some waterways are beginning to experience abnormalities in fish and aquatic populations which many are theorizing is due to the existence of pharmaceuticals in our water ways. In order to address this problem, our Department developed a pamphlet which will be disseminated to all pharmacies in the Salt Lake Valley, which tells people not to flush unwanted medications down the toilet, but rather put it in their weekly trash. Furthermore, our Department is working with the Salt Lake City Police Department to develop a take back program from homeowners that have unwanted controlled medications. We are also discussing involving nursing homes in the take back program as they generate a tremendous amount of unwanted medications, which are currently being disposed of into the sanitary sewer.

- Our Department also began work on developing a “get the Mercury out” campaign. We ordered more digital thermometers which will be given out free in exchange for mercury thermometers. This program will be launched in 2006.



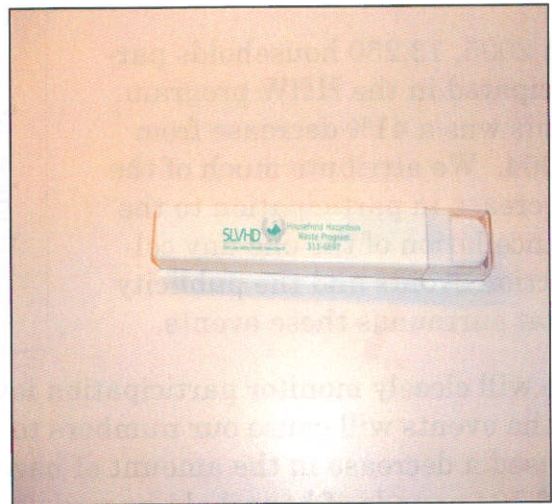
Controlled medications which the household hazardous waste program can no longer accept.



The new brochure on pharmaceutical waste which illustrates how this waste stream should properly be disposed.



- In conjunction with our Department's efforts to reduce the improper disposal of mercury, we worked with area distributors of thermostats to become involved in a National program which allows them to collect thermostats for free. Many of the old thermostats contain a large amount of mercury. Thermostat companies such as HoneyWell developed a National program where they will provide distributors of thermostats a container for the collection of old thermostats, once filled they will pay for the collection and disposal. We contacted all local thermostat distributors and they were all willing to participate in this program. We are currently working with them to solidify these programs. Once the programs are in place, we will develop a brochure that advertises this service and will be made available to contractors and demolition companies.



Digital thermometer which has the household hazardous waste program's phone number.

- Our Department also spent time this year working with the University of Utah's psychology departments on taking over a presentation program they have been working on for almost 4 years. An EPA grant awarded to the psychology department over 4 years ago gave them funding to develop an educational seminar which would work to change the way people purchase HHW. The program was developed and administered by the University over the last several years. The program also encourages people to use less toxic materials when possible and demonstrates to people how well less toxic products work. The grant money ran out and the University worked with us to show how the presentations have been done successfully. We gave some presentations during the later part of 2005 and hope to do more in 2006.

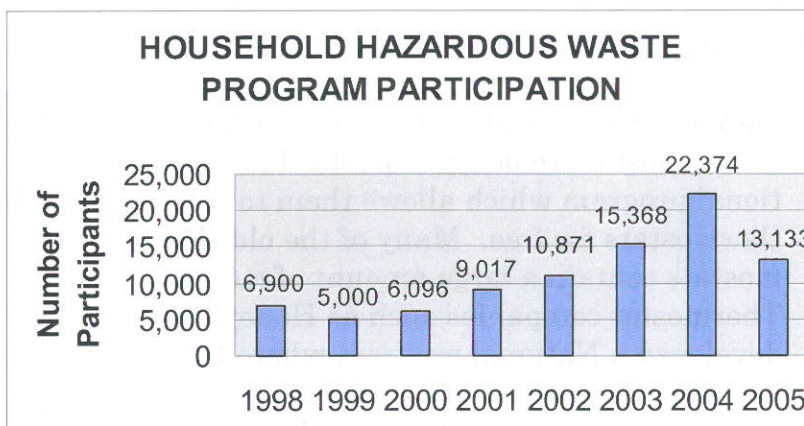


Some common examples of non toxic alternatives.



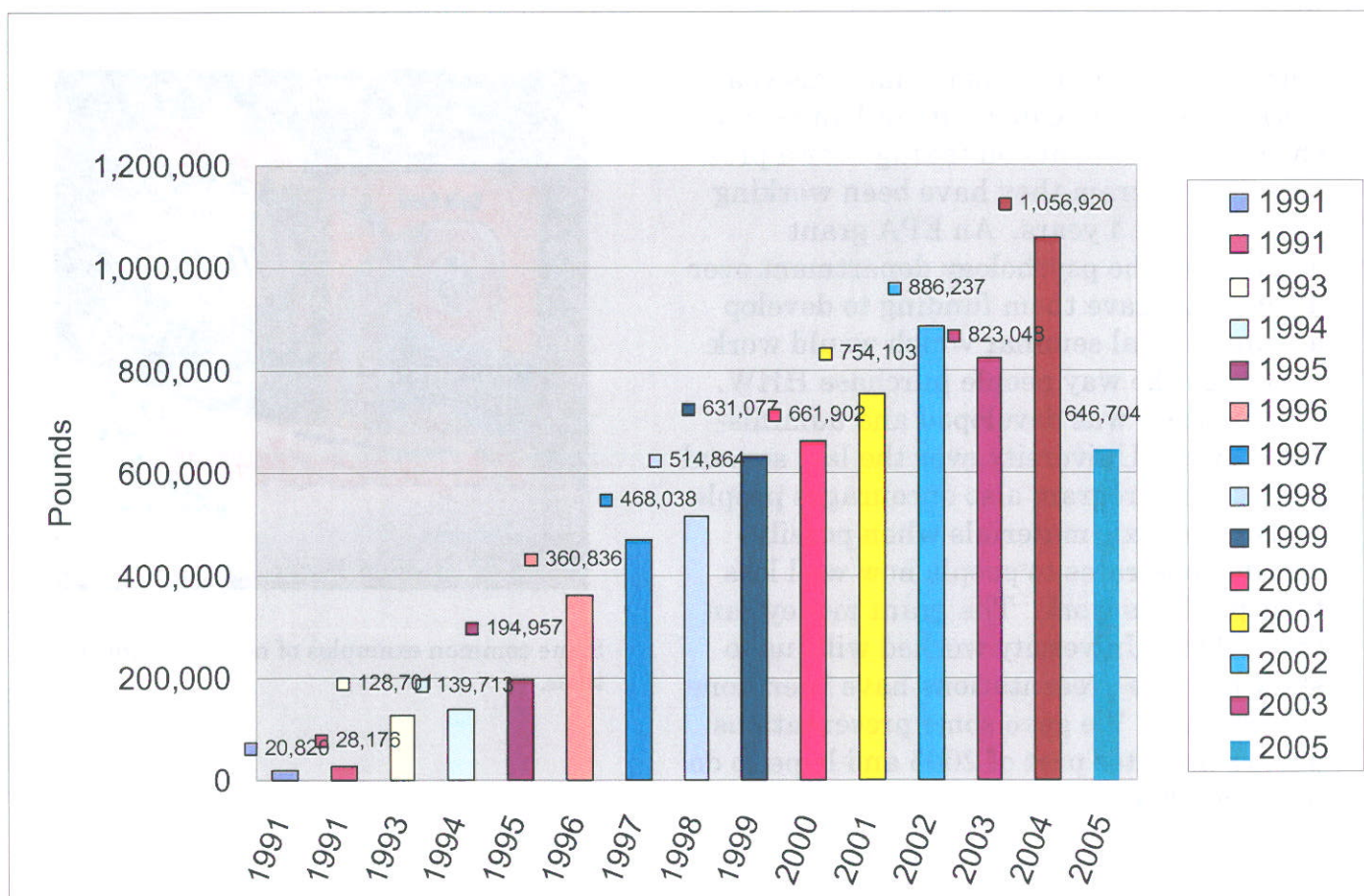
## Program Growth

In 2005, 13,250 households participated in the HHW program. This was a 41% decrease from 2004. We attribute much of the decrease in participation to the cancellation of the one-day collection events and the publicity that surrounds these events.



We will closely monitor participation levels in 2006 and are hopeful that the reinstitution of the events will cause our numbers to increase again. The decrease in participation caused a decrease in the amount of hazardous waste collected. In 2005, we collected 646,704 pounds of household hazardous waste, which is a 39% decrease from 2004. Interestingly, the 41% decrease in participation brought a 39% decrease in waste collected, demonstrating the close correlation of participation to waste collected.

## Household Hazardous Waste Collected 1992-2005



## Small Business Waste Assistance Program

The small business waste assistance program is available to companies that generate very small amounts of hazardous waste. The businesses have to generate less than 220 pounds per month of a hazardous waste to qualify. These businesses, referred to as Conditionally Exempt Small Quantity Generators (CESQG), can have their waste processed through the HHW program. We charge businesses the amount we incur in disposal, labor and supply costs. The number of businesses that participated in the program remained steady, we saw an increase of only 10. The amount of money collected actually decreased by a couple of thousand which is probably attributed to less expensive waste stream being brought in for disposal.

### Conditionally Exempt Small Quantity Generator Program 1997-2005

Year	Number of Businesses	Amount of \$ Collected
1997	178	\$17,138
1998	275	\$49,256
1999	471	\$67,269
2000	499	\$70,260
2001	415	\$86,475
2002	455	\$103,681
2003	490	\$88,608
2004	515	\$89,131
2005	525	\$87,791



## Program Costs

The cost to run the HHW program in 2005 was \$465,533. Correspondingly, the cost per pound was \$.72. The cost per pound increased from 2005 which in part is due to the fact that for the first time we included Health Department labor in the labor costs. Starting at the end of 2004, several Health Department employees began working on a weekly basis at the permanent facility located at the Salt Lake Valley Landfill. We have included the cost of their labor in order to accurately reflect the cost of processing the HHW that is collected. Furthermore, we incurred a large capital expenditure of a new office trailer for the facility located at the Salt Lake Valley Landfill. The previous office trailer has been there since the beginning of the program in 1995 and was beginning to have costly repairs. Also, there is an economies of scale associated with the collection of waste and as the amount of waste collected increases all costs associated with the program do not necessarily have to increase. We have some standard costs of running the facility which do not increase or decrease no matter how much waste is collected. Our disposal costs will obviously decrease as the amount of waste decreases but cost of labor actually increases every year because of cost of living adjustments.

For each of the years that appear in the table, the total cost is shown first. The amounts in parentheses reflects the cost after the money from the business waste program is subtracted from the total costs. The labor costs reflect the cost of staff that work at the HHW facilities and handle the waste. It does not include administrative costs. The costs also do not include mileage, vehicle expenses, travel, training, petty cash, or phone services for any Health Department staff involved in the HHW program. In determining the cost per pound we are strictly interested in the costs associated with handling, packaging, and shipping the waste.

### Household Hazardous Waste Program Costs 1996-2005

Year	Pounds of Waste	Disposal Costs	Supply Costs	Labor Costs	Total	Cost Per Pound (\$)
1996	360,836	\$132,511	\$65,379	\$61,529	<b>\$259,419</b>	.72
1997	468,038	\$105,058 (\$87,920)	\$253,920	\$139,108	\$498,086 <b>(\$480,948)</b>	1.06
1998	514,864	\$173,158 (\$123,902)	\$136,917	\$135,359	\$445,434 <b>(\$396,178)</b>	.86
1999	631,077	\$150,033 (\$82,764)	\$63,212	\$131,481	\$344,726 <b>(\$277,457)</b>	.54
2000	661,902	\$145,927 (\$75,667)	\$86,831	\$215,779	\$448,537 <b>(\$378,277)</b>	.67
2001	754,103	\$213,260 (\$128,785)	\$136,251	\$183,315	\$532,826 <b>(\$448,351)</b>	.70
2002	886,237	\$223,487 (119,806)	\$100,335	\$203,431	\$527,253 <b>(\$423,572)</b>	.59
2003	823,048	\$197,647 (\$88,608)	\$133,504	\$212,656	\$543,807 (455,199)	.66
2004	1,056,920	\$274,662 (\$185,531)	\$114,795	\$220,920	\$610,359 <b>(\$521,228)</b>	.58
2005	646,704	\$227,361 (\$139,570)	\$90,943	\$235,020	\$553,324 <b>(\$465,533)</b>	.72

\*Note: The numbers provided in this report are not audited numbers



# Pollution Prevention

During the year 2005, 376 new business license applications were received by the P2 staff. P2 staff conducted license reviews and audits for these businesses as well as 121 various consultations associated with businesses seeking help in determining their waste streams and proper disposal options. Working with the business license program allows the P2 staff the opportunity to help businesses early on so that any waste disposal issues can be resolved without enforcement. The majority of inspections are still conducted with staff from the State Department of Environmental Quality (DEQ) which further aids a “one-stop shopping” approach to understanding all of the various environmental regulations. In 2005, P2 staff also provided 57 consultations and 7 general pollution prevention audits to various businesses and homeowners who requested assistance on the proper disposal of various types of waste.

The following is a break down of the type business the P2 program has addressed in 2005:

Artist	3	Office Space	1
Auto Body	5	Plumber	4
Auto Detailing	3	Painting	8
Auto Repair	46	Photo Processor	8
Auto Towing	6	Printer	13
Carpet Cleaner	4	Pressure Washer	1
Car Dealership	4	Drug R&D	2
Car Wash	1	Recycler	6
Construction	21	Sales	36
Concrete	2	Salvage Yard	3
Car Rental	1	Sign Making	5
Drycleaner	3	Taxidermy	3
Dental Office	28	Trucking	8
Drug R&D	3	Veterinary Clinic	1
Electrical	3	Welding	2
Emissions	4	Woodworking	6
Environmental Cons.	2		
Equip. Rental/Repair	8		
Florist	2		
Heating & Air	4		
Handyman	6		
Janitorial/Clean. Serv.	14		
Jeweler	6		
Laboratory	1		
Lawn Maint./Landscape	20		
Liquid Waste Hauler	1		
Laundry	3		
Misc.	12		
Manufacturing	25		
Medical Office	14		



P2 staff continues to review pollution prevention plans that are required as part of stipulation and settlement agreements. Various educational documents and training has been made available to businesses requiring additional help in gaining compliance. There are many educational brochures that P2 staff has developed that are available to various types of businesses that generate waste such as drycleaner, photo processors, and automotive service shops. In 2005, a brochure titled "Small Business Waste Disposal" was created to educate small businesses on disposal options provided for them at the Household Hazardous Waste Facilities. P2 staff has also presented non-toxic alternatives to various household products in an effort to reduce the amount of toxic or hazardous waste needed to be disposed.

During 2005, a member of the P2 staff continues to sit on the Multi-Interest Review Panel that determines eligibility into the Clean Utah! program. Clean Utah! is a program that encourages and rewards business and other permit holders for going beyond compliance to preserve and protect Utah's environment.

## **Landfill, Processing Facility, Asbestos, Predemolition and Groundwater Programs**

These programs are performed by two FTE's in our Department. During calendar year 2005 these two FTE's permitted 16 facilities. In addition they addressed:

- 143 complaints and/or permits were addressed.
- 47 solid waste inspections performed.
- 466 hours were spent reviewing permit applications.
- 2 Notices of Violation were issued.
- 268 consultations were performed.
- There were two settlement conferences for violations relating to these programs and a \$10,000 penalty collected from one municipality and their contractors and consultants.
- We responded to 4 GRAMA requests for these programs and had 1 recharge zone referral.



In 2005 we updated revised Health Regulation #1. These are the regulations which govern solid waste management and permitting and under which we operate these programs. Our plan is to eliminate the exclusion from permitting that the scrap metal processors have had for many years. There have been instances of auto fluff failing the TCLP. Auto fluff is currently sent to the municipal landfills at a greatly reduced fee as daily cover. The landfill does not pay the Health Department a tonnage fee on this material. Due to the hazardous nature and complexity of obtaining a representative sample we believe it is in the best interest of county residents to monitor more closely this industry through a permit. The new revision also addresses the notion of a construction/demolition transfer station which had not been contemplated when the regulations were last modified in 1998 and which now exist in Salt Lake County. We began permitting concrete recyclers.

The number of complaints and/or permits worked on rose from 94 in 2004 to 143 in 2005. The number of hours spent reviewing permits rose from 380 in 2004 to 466 in 2005. The biggest jump came in the number of consultations which was 96 in 2004 and 268 in 2005. The number of GRAMA requests jumped from 1 in 2004 to 4 in 2005. While we had one on Notice of Violation in 2004 that jumped to two in 2005.

In 2005 biodiesel became a huge issue and is part of the reason our consultations jumped so much. Many garage processors cropped up and began competing with long established grease processors for used kitchen grease from the local restaurants.



Allied Waste began permitting of its new transfer station bringing the total to four in Salt Lake County. Below is a photo of the concrete pour for the floor of their new processing facility. All of the liquids will be contained and ultimately sent to the Salt Lake City sanitary sewer. The photo shows the drain lines which we inspect at that stage of construction.

